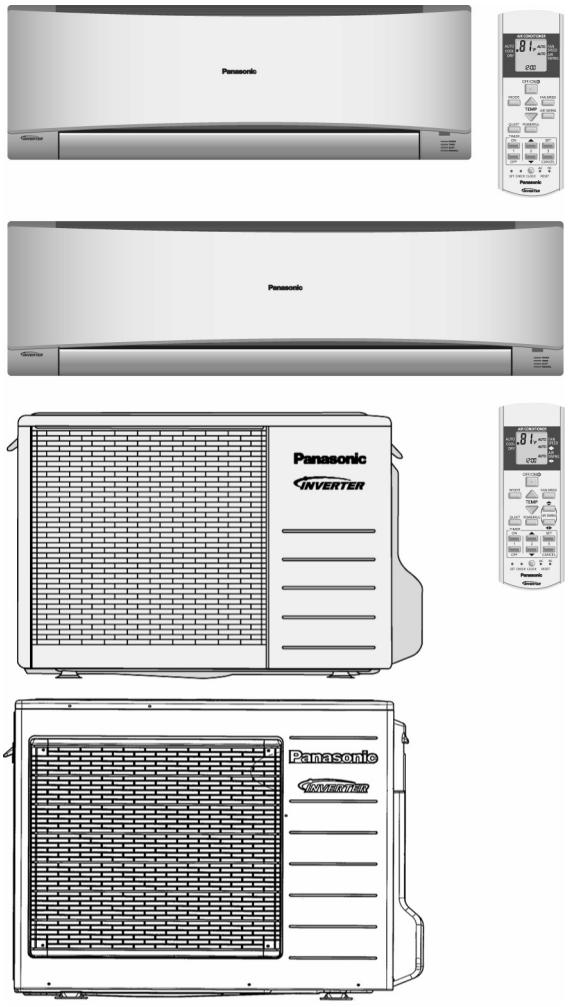
Order No: PHAAM1003029C1

Service Manual

Air Conditioner



Indoor Unit	Outdoor Unit
CS-S9JKUW	CU-S9JKU
CS-S12JKUW	CU-S12JKU
CS-S18JKU	CU-S18JKU
CS-S22JKU	CU-S22JKU

Please file and use this manual together with the service manual for Model No. CU-2S18JBU, Order No. PHAAM1003069C1.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the products dealt with in this service information by anyone else could result in serious injury or death.

⚠ PRECAUTION OF LOW TEMPERATURE

In order to avoid frostbite, be assured of no refrigerant leakage during the installation or repairing of refrigerant circuit.

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1. Safety Precautions

- Read the following “SAFETY PRECAUTIONS” carefully before perform any servicing.
- Electrical work must be installed or serviced by a licensed electrician. Be sure to use the correct rating of the power plug and main circuit for the model installed.
- The caution items stated here must be followed because these important contents are related to safety. The meaning of each indication used is as below. Incorrect installation or servicing due to ignoring of the instruction will cause harm or damage, and the seriousness is classified by the following indications.

⚠ **WARNING**	This indication shows the possibility of causing death or serious injury
⚠ **CAUTION**	This indication shows the possibility of causing injury or damage to properties.

- The items to be followed are classified by the symbols:

⃠	This symbol denotes item that is PROHIBITED from doing.

- Carry out test run to confirm that no abnormality occurs after the servicing. Then, explain to user the operation, care and maintenance as stated in instructions. Please remind the customer to keep the operating instructions for future reference.

⚠ **WARNING**	
1. Do not modify the machine, part, material during repairing service.	
2. If wiring unit is supplied as repairing part, do not repair or connect the wire even only partial wire break. Exchange the whole wiring unit.	
3. Do not wrench the fasten terminal. Pull it out or insert it straightly.	
4. Engage authorized dealer or specialist for installation and servicing. If installation of servicing done by the user is defective, it will cause water leakage, electrical shock or fire.	
5. Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electric shock or fire.	
6. Use the attached accessories parts and specified parts for installation and servicing. Otherwise, it will cause the set to fall, water leakage, fire or electrical shock.	
7. Install at a strong and firm location which is able to withstand the set’s weight. If the strength is not enough or installation is not properly done, the set will drop and cause injury.	
8. For electrical work, follow the local national wiring standard, regulation and the installation instruction. An independent circuit and single outlet must be used. If electrical circuit capacity is not enough or defect found in electrical work, it will cause electrical shock or fire.	
9. This equipment is strongly recommended to be installed with Earth Leakage Circuit Breaker (ELCB) or Residual Current Device (RCD). Otherwise, it may cause electrical shock and fire in case equipment breakdown or insulation breakdown.	
10. Do not use joint cable for indoor/outdoor connection cable. Use the specified indoor/outdoor connection cable, refer to installation instruction CONNECT THE CABLE TO THE INDOOR UNIT and connect tightly for indoor/outdoor connection. Clamp the cable so that no external force will be acted on the terminal. If connecting or fixing is not perfect, it will cause heat up or fire at the connection.	
11. Wire routing must be properly arranged so that control board cover is fixed properly. If control board cover is not fixed perfectly, it will cause heat-up or fire at the connection point of terminal, fire or electrical shock.	
12. When install or relocate air conditioner, do not let any substance other than the specified refrigerant, eg. air etc. mix into refrigeration cycle (piping). (Mixing of air etc. will cause abnormal high pressure in refrigeration cycle and result in explosion, injury etc.).	
13. Do not install outdoor unit near handrail of veranda. When installing air-conditioner unit at veranda of high rise building, child may climb up to outdoor unit and cross over the handrail and causing accident.	
14. This equipment must be properly earthed. Earth line must not be connected to gas pipe, water pipe, earth of lightning rod and telephone. Otherwise, it may cause electrical shock in case equipment breakdown or insulation breakdown.	⃠
15. Keep away from small children, the thin film may cling to nose and mouth and prevent breathing.	⃠
16. Do not use unspecified cord, modified cord, joint cord or extension cord for power supply cord. Do not share the single outlet with other electrical appliances. Poor contact, poor insulation or over current will cause electrical shock or fire.	⃠
17. Tighten the flare nut with torque wrench according to specified method. If the flare nut is over-tightened, after a long period, the flare may break and cause refrigerant gas leakage.	
18. For R410A models, when connecting the piping, do not use any existing (R22) pipes and flares nuts. Using such same may cause abnormally high pressure in the refrigeration cycle (piping), and possibly result in explosion and injury. In case of using existing (R22) pipes during installation of R410A models, must carry out pump down properly to collect back the refrigerant and oil before installation new unit. Thickness of copper pipes used with R410A must be more than 0.6mm. Never use copper pipes thinner than 0.6mm. It is desirable that the amount of residual oil is less than 40 mg/10m.	⃠

19. During installation, install the refrigerant piping properly before run the compressor. (Operation of compressor without fixing refrigeration piping and valves at opened condition will cause suck-in of air, abnormal high pressure in refrigeration cycle and result in explosion, injury etc.).
20. During pump down operation, stop the compressor before remove the refrigeration piping. (Removal of refrigeration piping while compressor is operating and valves are opened condition will cause suck-in of air, abnormal high pressure in refrigeration cycle and result in explosion, injury etc.).
21. After completion of installation or service, confirm there is no leakage of refrigerant gas. It may generate toxic gas when the refrigerant contacts with fire.
22. Ventilate if there is refrigerant gas leakage during operation. It may cause toxic gas when the refrigerant contacts with fire.
23. Do not insert your fingers or other objects into the unit, high speed rotating fan may cause injury.
24. Must not use other parts except original parts describe in catalog and manual.

CAUTION

1. Do not install the unit at place where leakage of flammable gas may occur. In case gas leaks and accumulates at surrounding of the unit, it may cause fire.
2. Carry out drainage piping as mentioned in installation instructions. If drainage is not perfect, water may enter the room and damage the furniture.
3. Tighten the flare nut with torque wrench according to specified method. If the flare nut is over-tightened, after a long period, the flare may break and cause refrigerant gas leakage.
4. Do not touch outdoor unit air inlet and aluminium fin. It may cause injury.
5. Select an installation location which is easy for maintenance.
6. Pb free solder has a higher melting point than standard solder; typically the melting point is 50°F – 70°F higher. Please use a high temperature solder iron. In case of the soldering iron with temperature control, please set it to 700 ± 20°F. Pb free solder will tend to splash when heated too high (about 1100°F).
7. Power supply connection to the air conditioner. Connect the power supply cord of the air conditioner to the mains using one of the following methods.
   Power supply point shall be the place where there is ease for access for the power disconnection in case of emergency. In some countries, permanent connection of this room air conditioner to the power supply is prohibited.
   i. Power supply connection to the receptacle using a power plug.
      Use an approved 15/16A (1.0 ~ 1.75HP) or 16A (2.0HP) or 20A (2.5HP) power plug with earth pin for the connection to the socket.
   ii. Power supply connection to a circuit breaker for the permanent connection.
      Use an approved 16A (1.0 ~ 2.0HP) or 20A (2.5HP) circuit breaker for the permanent connection. It must be a double pole switch with a minimum 3.0 mm contact gap.
8. Do not release refrigerant during piping work for installation, servicing, reinstallation and during repairing a refrigerant parts. Take care of the liquid refrigerant, it may cause frostbite.
9. Installation or servicing work: It may need two people to carry out the installation or servicing work.
10. Do not install this appliance in a laundry room or other location where water may drip from the ceiling, etc.
11. Do not sit or step on the unit, you may fall down accidentally.
12. Do not touch the sharp aluminium fin, sharp parts may cause injury.

2. Specification

Model			Indoor	CS-S9JKUW						CS-S12JKUW					
			Outdoor	CU-S9JKU						CU-S12JKU					
Performance Test Condition				ARI						ARI					
Power Supply			Phase, Hz	Single, 60						Single, 60					
			V	208			230			208			230		
				Min.	Mid.	Max.	Min.	Mid.	Max.	Min.	Mid.	Max.	Min.	Mid.	Max.
Cooling	Capacity		kW	1.20	2.49	3.00	1.20	2.49	3.00	1.20	3.48	3.85	1.20	3.48	3.85
			BTU/h	4100	8500	10200	4100	8500	10200	4100	11900	13100	4100	11900	13100
	Running Current		A	-	3.2	-	-	2.8	-	-	4.8	-	-	4.3	-
	Input Power		W	250	600	800	250	600	800	250	950	1.15k	250	950	1.15k
	EER		W/W	4.80	4.15	3.75	4.80	4.15	3.75	4.80	3.66	3.35	4.80	3.66	3.35
			Btu/hW	16.40	14.15	12.75	16.40	14.15	12.75	16.40	12.55	11.40	16.40	12.55	11.40
	Power Factor		%	-	90	-	-	93	-	-	95	-	-	96	-
	Indoor Noise (H / L / QLo)		dB-A	40 / 25 / 20			40 / 25 / 20			43 / 28 / 20			43 / 28 / 20		
			Power Level dB	56 / -			56 / -			59 / -			59 / -		
	Outdoor Noise (H / L / QLo)		dB-A	45 / - / -			47 / - / -			46 / - / -			48 / - / -		
			Power Level dB	60 / -			62 / -			61 / -			63 / -		
Max Current (A) / Max Input Power (W)				4.1 / 900						5.4 / 1.22k					
Starting Current (A)				3.2						4.8					
Min Circuit Ampacity				15.0						15.0					
Max. Overcurrent Protection				15.0						15.0					
Compressor	Type			Hermetic Motor						Hermetic Motor					
	Motor Type			Brushless (6 poles)						Brushless (6 poles)					
	Output Power		W	700						700					
Indoor Fan	Type			Cross-flow fan						Cross-flow fan					
	Material			ASG20K1						ASG20K1					
	Motor Type			Transistor (8 poles)						Transistor (8 poles)					
	Input Power		W	47.0 - 47.0						47.0 - 47.0					
	Output Power		W	30						30					
	Speed	QLo	rpm	610						630					
		Lo	rpm	710						790					
		Me	rpm	920						1030					
		Hi	rpm	1130						1270					
		SHi	rpm	1230						1400					
Outdoor Fan	Type			Propeller						Propeller					
	Material			PP						PP					
	Motor Type			Induction (6 poles)						Induction (6 poles)					
	Input Power		W	-						-					
	Output Power		W	28						28					
	Speed	Hi	rpm	760 - 840						760 - 840					
Moisture Removal			L/h (Pt/h)	0.6 (1.3)						1.1 (2.3)					
Indoor Airflow	QLo		m^3/min (ft^3/min)	6.2 (217)						6.0 (210)					
	Lo		m^3/min (ft^3/min)	7.2 (251)						7.5 (264)					
	Me		m^3/min (ft^3/min)	9.3 (326)						9.7 (345)					
	Hi		m^3/min (ft^3/min)	11.4 (400)						12.0 (425)					
	SHi		m^3/min (ft^3/min)	12.4 (435)						13.2 (469)					
Outdoor Airflow	Hi		m^3/min (ft^3/min)	29.7 (1050)			31.0 (1095)			29.7 (1050)			31.0 (1095)		

Refrigeration Cycle	Control Device		Capillary Tube		Capillary Tube	
	Refrigerant Oil	cm^3	RB68A or Freol Alpha68M (320)		RB68A or Freol Alpha68M (320)	
	Refrigerant Type	g (oz)	R410A, 965 (34.1)		R410A, 980 (34.6)	
Dimension	Height(I/D / O/D)	mm (inch)	290 (11-7/16) / 540 (21-9/32)		290 (11-7/16) / 540 (21-9/32)	
	Width (I/D / O/D)	mm (inch)	870 (34-9/32) / 780 (30-23/32)		870 (34-9/32) / 780 (30-23/32)	
	Depth (I/D / O/D)	mm (inch)	204 (8-1/16) / 289 (11-13/32)		204 (8-1/16) / 289 (11-13/32)	
Weight	Net (I/D / O/D)	kg (lb)	9 (20)	37 (82)	9 (20)	37 (82)
Piping	Pipe Diameter (Liquid / Gas)	mm (inch)	6.35 (1/4) / 9.52 (3/8)		6.35 (1/4) / 12.70 (1/2)	
	Standard length	m (ft)	7.5 (24.6)		7.5 (24.6)	
	Length range (min – max)	m (ft)	3 (9.8) ~ 15 (49.2)		3 (9.8) ~ 15 (49.2)	
	I/D & O/D Height different	m (ft)	5 (16.4)		5 (16.4)	
	Additional Gas Amount	g/m (oz/ft)	20 (0.2)		20 (0.2)	
	Length for Additional Gas	m (ft)	7.5 (24.6)		7.5 (24.6)	
Drain Hose	Inner Diameter	mm	16		16	
	Length	mm	650		650	
Indoor Heat Exchanger	Fin Material		Aluminium (Pre Coat)		Aluminium (Pre Coat)	
	Fin Type		Slit Fin		Slit Fin	
	Row x Stage x FPI		2 x 15 x 19		2 x 15 x 21	
	Size (W x H x L)	mm	25.4 x 315 x 610		25.4 x 315 x 610	
Outdoor Heat Exchanger	Fin Material		Aluminium (Blue coated)		Aluminium (Blue coated)	
	Fin Type		Corrugate Fin		Corrugate Fin	
	Row x Stage x FPI		2 x 24 x 17		2 x 24 x 17	
	Size (W x H x L)	mm	36.4 x 504 x 713 684		36.4 x 504 x 713 684	
Air Filter	Material		Polypropelene		Polypropelene	
	Type		One-touch		One-touch	
Power Supply			Outdoor		Outdoor	
Power Supply Cord		A	-		-	
Thermostat			-		-	
Protection Device			-		-	
			DRY BULB	WET BULB	DRY BULB	WET BULB
Indoor Operation Range		Maximum	89.6	73.4	89.6	73.4
		Minimum	60.8	51.8	60.8	51.8
Outdoor Operation Range		Maximum	109.4	78.8	109.4	78.8
		Minimum	60.8	51.8	60.8	51.8

1. Cooling capacities are based on indoor temperature of 80°F DRY BULB, 67°F WET BULB and outdoor air temperature of 95°F DRY BULB, 75°F WET BULB.
2. Specifications are subjected to change without prior notice for further improvement.

Model			Indoor	CS-S18JKU						CS-S22JKU					
			Outdoor	CU-S18JKU						CU-S22JKU					
Performance Test Condition				ARI						ARI					
Power Supply			Phase, Hz	Single, 60						Single, 60					
			V	208			230			208			230		
				Min.	Mid.	Max.	Min.	Mid.	Max.	Min.	Mid.	Max.	Min.	Mid.	Max.
Cooling	Capacity		kW	1.30	5.01	5.80	1.30	5.01	5.80	1.30	6.36	6.85	1.30	6.36	6.85
			BTU/h	4400	17100	19800	4400	17100	19800	4400	21600	23400	4400	21600	23400
	Running Current		A	-	6.7	-	-	6.0	-	-	11.2	-	-	10.0	-
	Input Power		W	250	1.30k	1.85k	250	1.30k	1.85k	250	2.25k	2.45k	250	2.25k	2.45k
	EER		W/W	5.20	3.85	3.14	5.20	3.85	3.14	5.20	2.83	2.80	5.20	2.83	2.80
			Btu/hW	17.60	13.15	10.70	17.60	13.15	10.70	17.60	9.60	6.55	17.60	9.60	9.55
	Power Factor		%	-	93	-	-	94	-	-	97	-	-	98	-
	Indoor Noise (H / L / QLo)		dB-A	47 / 39 / 36			47 / 39 / 36			47 / 39 / 36			47 / 39 / 36		
			Power Level dB	63 / -			63 / -			63 / -			63 / -		
	Outdoor Noise (H / L / QLo)		dB-A	47 / - / -			47 / - / -			50 / - / -			50 / - / -		
			Power Level dB	61 / -			61 / -			64 / -			64 / -		
Max Current (A) / Max Input Power (W)				9.0 / 1.99k						10.8 / 2.48k					
Starting Current (A)				6.7						11.2					
Min Circuit Ampacity				15.0						20.0					
Max. Overcurrent Protection				20.0						25.0					
Compressor	Type			Hermetic Motor						Hermetic Motor					
	Motor Type			Brushless (4 poles)						Brushless (4 poles)					
	Output Power		W	900						900					
Indoor Fan	Type			Cross-flow fan						Cross-flow fan					
	Material			ASG30K1						ASG30K1					
	Motor Type			Transistor (8 poles)						Transistor (8 poles)					
	Input Power		W	94.8 - 94.8						94.8 - 94.8					
	Output Power		W	30						30					
	Speed	QLo	rpm	990						990					
		Lo	rpm	1090						1090					
		Me	rpm	1270						1270					
		Hi	rpm	1460						1460					
		SHi	rpm	1500						1500					
Outdoor Fan	Type			Propeller						Propeller					
	Material			PP						PP					
	Motor Type			Induction (8 poles)						Induction (8 poles)					
	Input Power		W	-						-					
	Output Power		W	38						38					
	Speed	Hi	rpm	500 - 550						550 - 600					
Moisture Removal			L/h (Pt/h)	1.7 (3.6)						2.9 (6.1)					
Indoor Airflow	QLo		m^3/min (ft^3/min)	12.5 (441)						12.5 (441)					
	Lo		m^3/min (ft^3/min)	13.7 (485)						13.7 (485)					
	Me		m^3/min (ft^3/min)	16.0 (565)						16.0 (565)					
	Hi		m^3/min (ft^3/min)	18.4 (650)						18.4 (650)					
	SHi		m^3/min (ft^3/min)	18.9 (668)						18.9 (668)					
Outdoor Airflow	Hi		m^3/min (ft^3/min)	37.5 (1325)			41.6 (1470)			43.8 (1545)			47.5 (1675)		
Refrigeration Cycle	Control Device			Capillary Tube						Capillary Tube					
	Refrigerant Oil		cm^3	RB68A or Freol Alpha68M (400)						RB68A or Freol Alpha68M (400)					

	Refrigerant Type	g (oz)	R410A, 1.18k (41.7)		R410A, 1.37k (48.4)	
Dimension	Height(I/D / O/D)	mm (inch)	290 (11-7/16) / 795 (31-5/16)		290 (11-7/16) / 795 (31-5/16)	
	Width (I/D / O/D)	mm (inch)	1070 (42-5/32) / 875 (34-15/32)		1070 (42-5/32) / 875 (34-15/32)	
	Depth (I/D / O/D)	mm (inch)	235 (9-9/32) / 320 (12-5/8)		235 (9-9/32) / 320 (12-5/8)	
Weight	Net (I/D / O/D)	kg (lb)	12 (26)	52 (115)	12 (26)	53 (117)
Piping	Pipe Diameter (Liquid / Gas)	mm (inch)	6.35 (1/4) / 12.70 (1/2)		6.35 (1/4) / 15.88 (5/8)	
	Standard length	m (ft)	5.0 (16.4)		5.0 (16.4)	
	Length range (min – max)	m (ft)	3 (9.8) ~ 20 (65.6)		3 (9.8) ~ 20 (65.6)	
	I/D & O/D Height different	m (ft)	15 (49.2)		15 (49.2)	
	Additional Gas Amount	g/m (oz/ft)	20 (0.2)		20 (0.2)	
	Length for Additional Gas	m (ft)	10 (32.8)		10 (32.8)	
Drain Hose	Inner Diameter	mm	16		16	
	Length	mm	650		650	
Indoor Heat Exchanger	Fin Material		Aluminium (Pre Coat)		Aluminium (Pre Coat)	
	Fin Type		Slit Fin		Slit Fin	
	Row x Stage x FPI		2 x 15 x 21		2 x 15 x 21	
	Size (W x H x L)	mm	25.4 x 315 x 810		25.4 x 315 x 810	
Outdoor Heat Exchanger	Fin Material		Aluminium (Blue coated)		Aluminium (Blue coated)	
	Fin Type		Corrugate Fin		Corrugate Fin	
	Row x Stage x FPI		2 x 36 x 19		2 x 36 x 18	
	Size (W x H x L)	mm	36.4 x 756 x 620 620		36.4 x 756 x 839 811	
Air Filter	Material		Polypropelene		Polypropelene	
	Type		One-touch		One-touch	
Power Supply			Indoor		Indoor	
Power Supply Cord		A	-		-	
Thermostat			-		-	
Protection Device			-		-	
			DRY BULB	WET BULB	DRY BULB	WET BULB
Indoor Operation Range		Maximum	89.6	73.4	89.6	73.4
		Minimum	60.8	51.8	60.8	51.8
Outdoor Operation Range		Maximum	109.4	78.8	109.4	78.8
		Minimum	60.8	51.8	60.8	51.8

1. Cooling capacities are based on indoor temperature of 80°F DRY BULB, 67°F WET BULB and outdoor air temperature of 95°F DRY BULB, 75°F WET BULB.
2. Specifications are subjected to change without prior notice for further improvement.

Model			Outdoor Unit	CU-2S18JBU	
Indoor Unit Combination				3.2kW + 3.2kW	
Power Source				1 Phase, 208-230V, 60Hz (Power supply from outdoor unit)	
Cooling Operation	Capacity		kW	5.28 (2.10 ~ 5.86)	
			BTU/h	18000 (7200 ~ 20000)	
	Electrical Data	Running Current	A	7.1 - 6.4	
		Power Input	kW	1.40 (0.39 ~ 1.63)	
		EER	W/W	3.77 (5.38 ~ 3.60)	
			BTU/hW	12.85 (18.45 ~ 12.25)	
	Noise	Sound Pressure Level	dB-A	48	
		Sound Power Level	dB	62	
Maximum Current			A	13.6	
Starting Current			A	7.1	
Minimum Circuit Ampacity			A	20	
Dimension	Height		mm (inch)	795 (31-5/16)	
	Width		mm (inch)	875 + 95 (34-15/32 + 3-3/4)	
	Depth		mm (inch)	320 (12-5/8)	
Net Weight			kg (lb)	69 (152)	
Connection Cable				3 + 1 (Earth) ø1.5 mm^2	
Pipe Length Range (1 room)			m (ft)	3 ~ 25 (9.8 ~ 82.0)	
Maximum Pipe Length (Total Room)			m (ft)	50 (164.0)	
Refrigerant Pipe Diameter	Liquid Side		mm (inch)	6.35 (1/4)	
	Gas Side		mm (inch)	9.52 (3/8)	
Compressor	Type			Scroll Type	
	Motor Type			DC Brushless (4-poles)	
	Rated Output		W	1.30k	
Air Circulation	Type			Propeller Fan	
	Motor Type			DC Brushless (8-poles)	
	Rated Output		W	60	
Fan Speed	High		RPM	570	
Heat Exchanger	Type			Plate fin configuration forced draft type	
	Tube Material			Copper	
	Fin Material			Aluminum	
	Row/Stage			2/36	
	FPI			19	
Air Volume	High		m^3/min (ft^3/min)	37.2 (1313)	
Refrigerant Control Device				Expansion Valve	
Refrigerant Oil				POE (RB-68A)	
Refrigerant (R410A)			g (oz)	1.92k (67.8)	
				Dry Bulb	Wet Bulb
Indoor Operation Range	Cooling	Maximum	°F	89.6	73.4
		Minimum	°F	60.8	51.8
Outdoor Operation Range	Cooling	Maximum	°F	109.4	78.8
		Minimum	°F	60.8	51.8

Note

- Specifications are subject to change without notice for further improvement.

- **Multi split combination possibility:**
  - A single outdoor unit enables air conditioning of up to two separate rooms for CU-2S18JBU.

			Outdoor Unit	
			CU-2S18JBU	
			A	**B**
Wall	2.8 Kw	CS-S9JKUW	●	●
	3.2 kW	CS-S12JKUW	●	●
Capacity range of connectable indoor units		From 5.6 kW to 6.4 kW		
Piping Length	1 room maximum pipe length (m (ft))	25 (82.0)		
	Allowable elevation (m (ft))	15 (49.2)		
	Total allowable pipe length (m (ft))	50 (164.0)		
	Total pipe length for maximum chargeless length (m (ft))	20 (65.6)		
	Additional gas amount over chargeless length (g/m (oz/ft))	20 (0.2)		
		Note: "●" : Available		

Remarks for CU-2S18JBU
1. At least two indoor units must be connected.
2. The total nominal cooling capacity of indoor untis that will be connected to outdoor unit must be within connectable capacity range of indoor unit.
   (as shown in the table above)
   Example: The indoor units' combination below is possible to connect to CU-2S18JBU. (Total nominal capacity of indoor units is between 5.6 kW to 6.4 kW)
   1) Two CS-S9JKUW only. (Total nominal cooling capacity is 5.6 kW)
   2) One CS-S9JKUW and one CS-S12JKUW. (Total nominal cooling capacity is 6.0 kW)

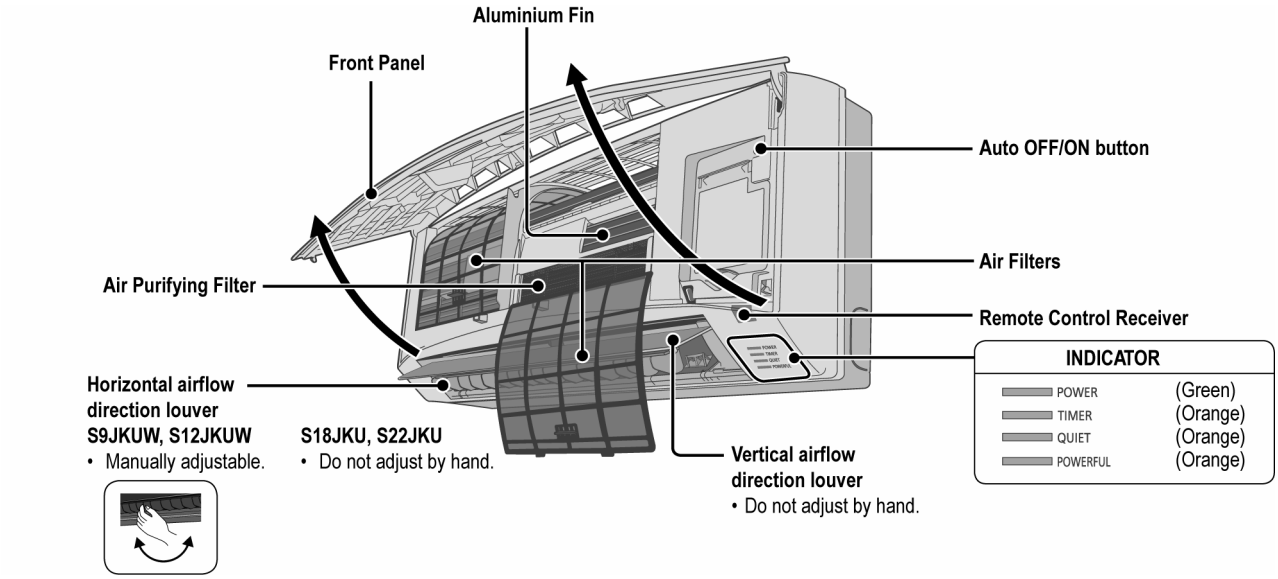
Outdoor Unit	Indoor unit combination		Operation Mode	Capacity (kW)		Input Power (kW)		Current (A) 208V 60Hz	Current (A) 230V 60Hz	Moisture Removal Volume (L/h)
	Operation	Class (kW)		Rating	Min - Max	Rating	Min - Max			
CU-2S18JBU	One-room Operation	2.8	Cooling	2.82	1.81 ~ 3.27	0.81	0.39 ~ 1.02	4.3	3.9	0.5
		3.2		3.21	1.85 ~ 3.75	0.97	0.39 ~ 1.23	5.1	4.6	0.6
	Two-room Operation	2.8 + 2.8	Cooling	5.28	2.09 ~ 5.86	1.48	0.39 ~ 1.77	7.5	6.8	0.5 + 0.5
		2.8 + 3.2		5.28	2.10 ~ 5.86	1.44	0.39 ~ 1.70	7.3	6.6	0.5 + 0.6
		3.2 + 3.2		5.28	2.10 ~ 5.86	1.40	0.39 ~ 1.63	7.1	6.4	0.6 + 0.6

Outdoor Unit	Indoor unit combination		Operation Mode	Capacity (kW)		Input Power (kW)		Current (A) 208V 60Hz	Current (A) 230V 60Hz	Moisture Removal Volume (L/h)
	Operation	Class (kW)		Rating	Min - Max	Rating	Min - Max			
CU-2S18JBU	One-room Operation	2.8	Cooling	9600	6200 ~ 11200	0.81	0.39 ~ 1.02	4.3	3.9	1.1
		3.2		10900	6300 ~ 12800	0.97	0.39 ~ 1.23	5.1	4.6	1.3
	Two-room Operation	2.8 + 2.8	Cooling	18000	7100 ~ 20000	1.48	0.39 ~ 1.77	7.5	6.8	1.1 + 1.1
		2.8 + 3.2		18000	7200 ~ 20000	1.44	0.39 ~ 1.70	7.3	6.6	1.1 + 1.3
		3.2 + 3.2		18000	7200 ~ 20000	1.40	0.39 ~ 1.63	7.1	6.4	1.3 + 1.3

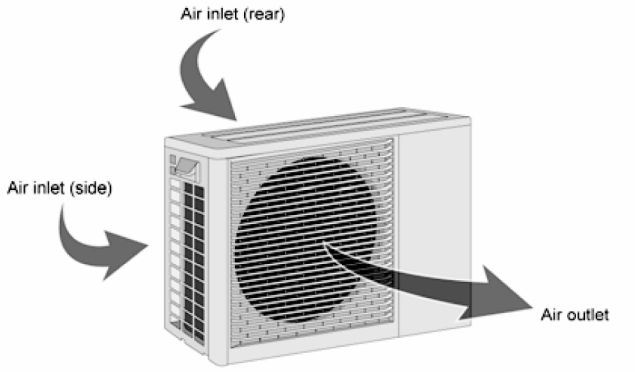
- Specifications are subject to change without notice for further improvement.

3. Location of Controls and Components

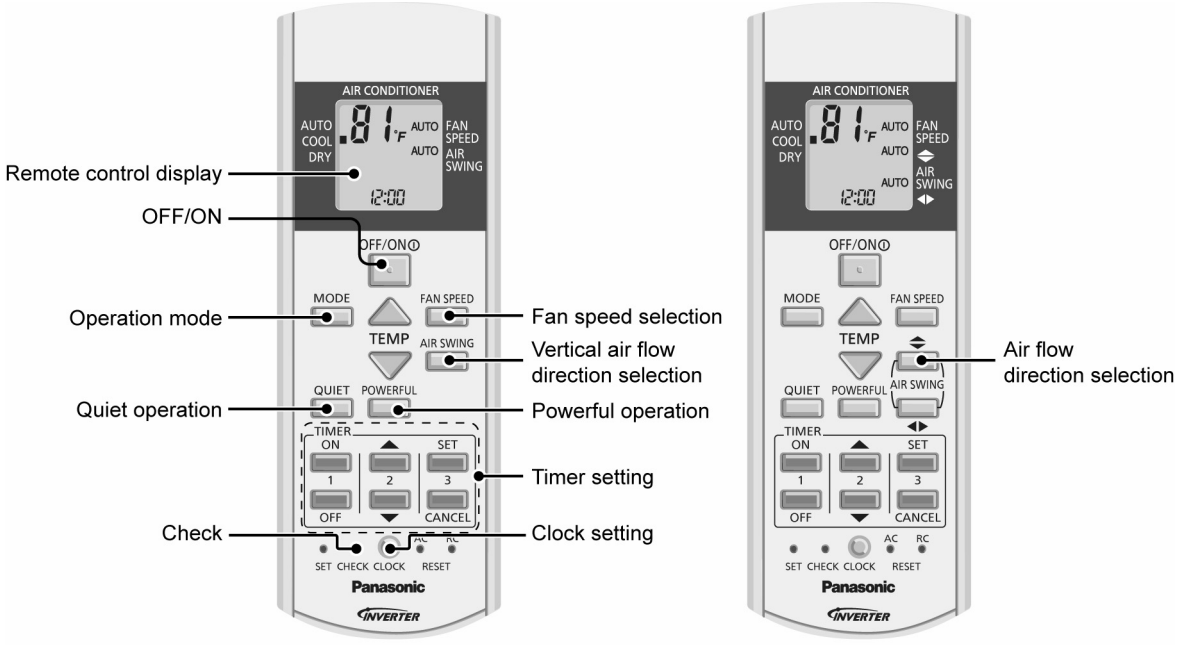
3.1 Indoor Unit



3.2 Outdoor Unit



3.3 Remote Control



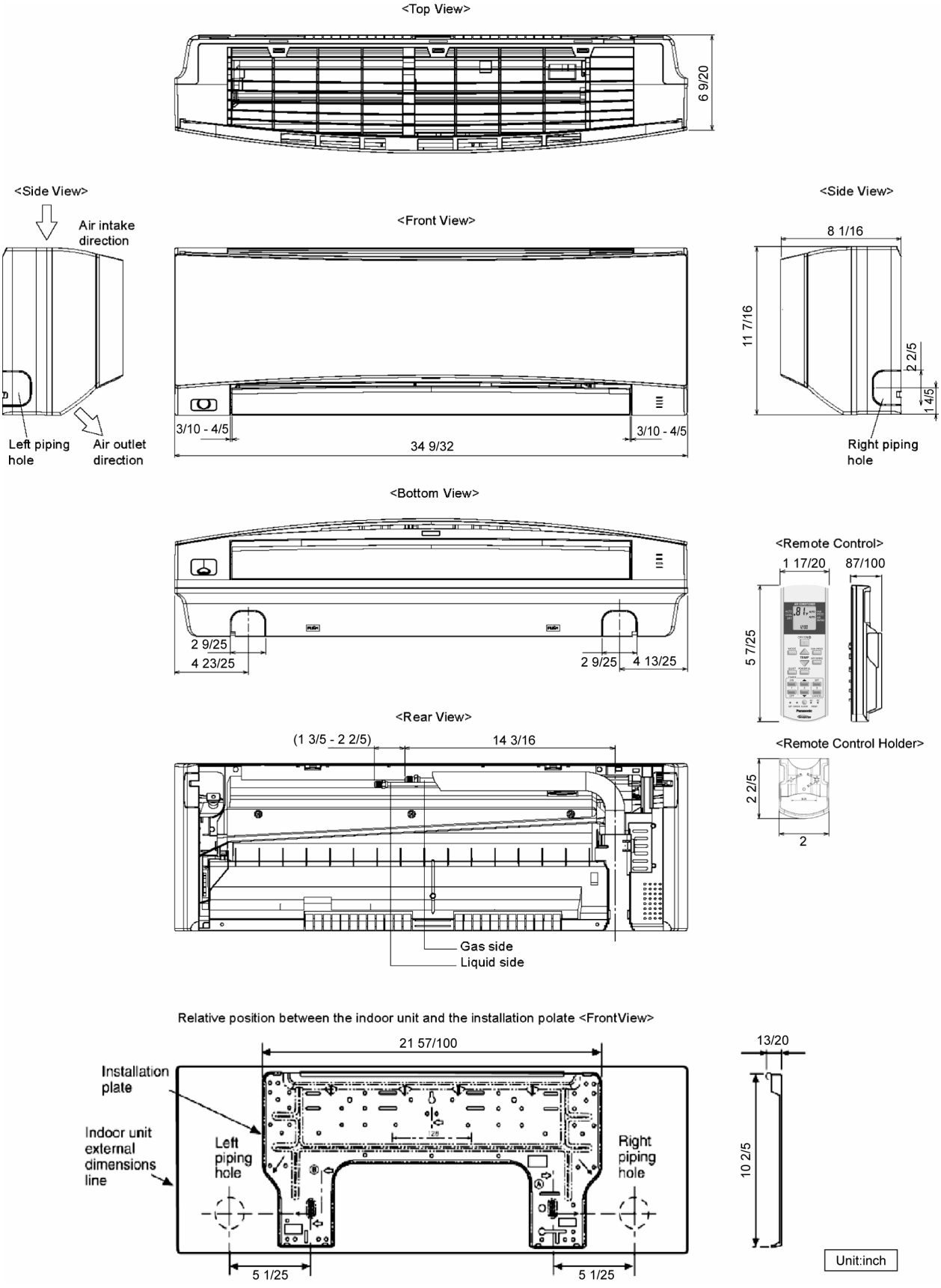
S9JKUW, S12JKUW

S18JKU, S24JKU

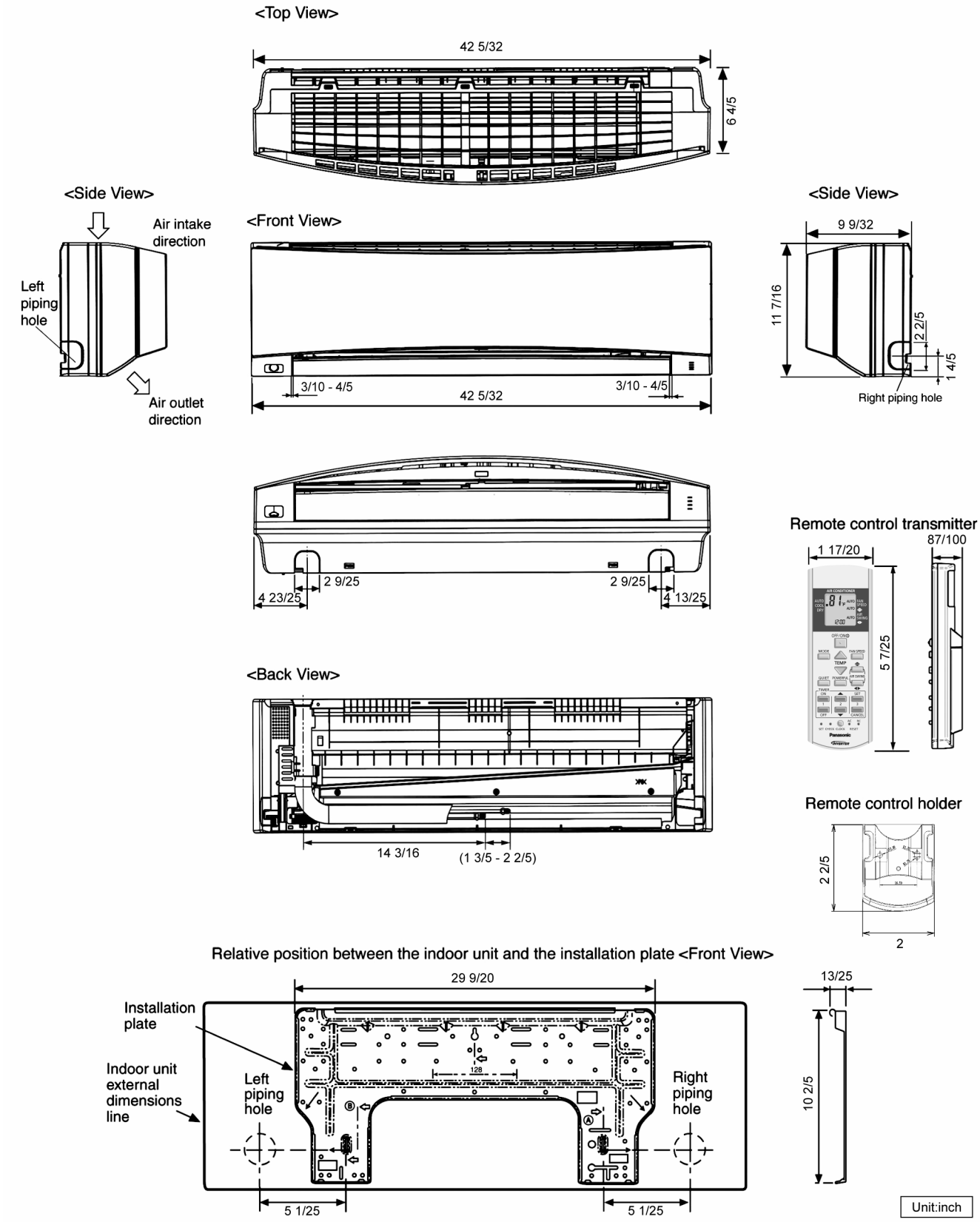
4. Dimensions

4.1 Indoor Unit

4.1.1 CS-S9JKUW CS-S12JKUW

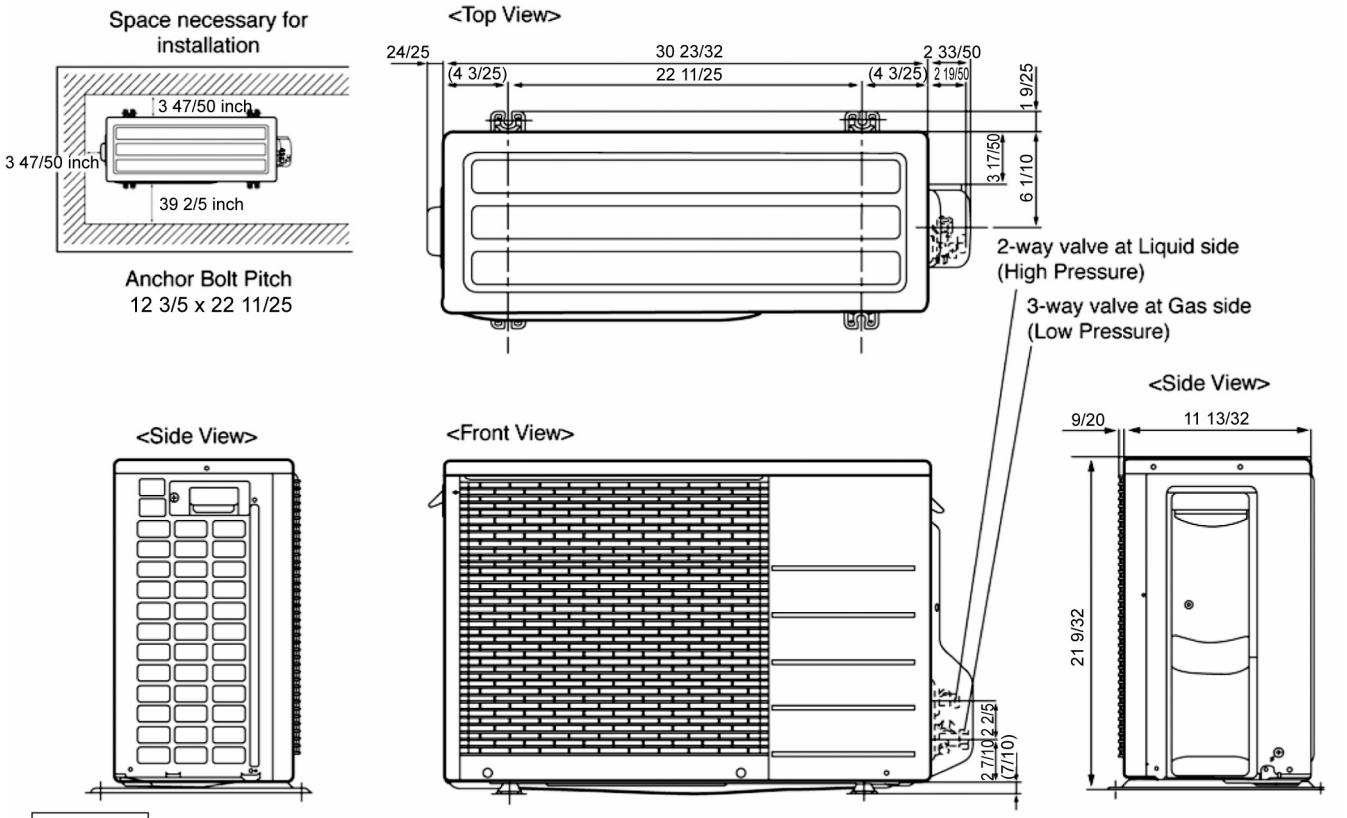


4.1.2 CS-S18JKU CS-S22JKU



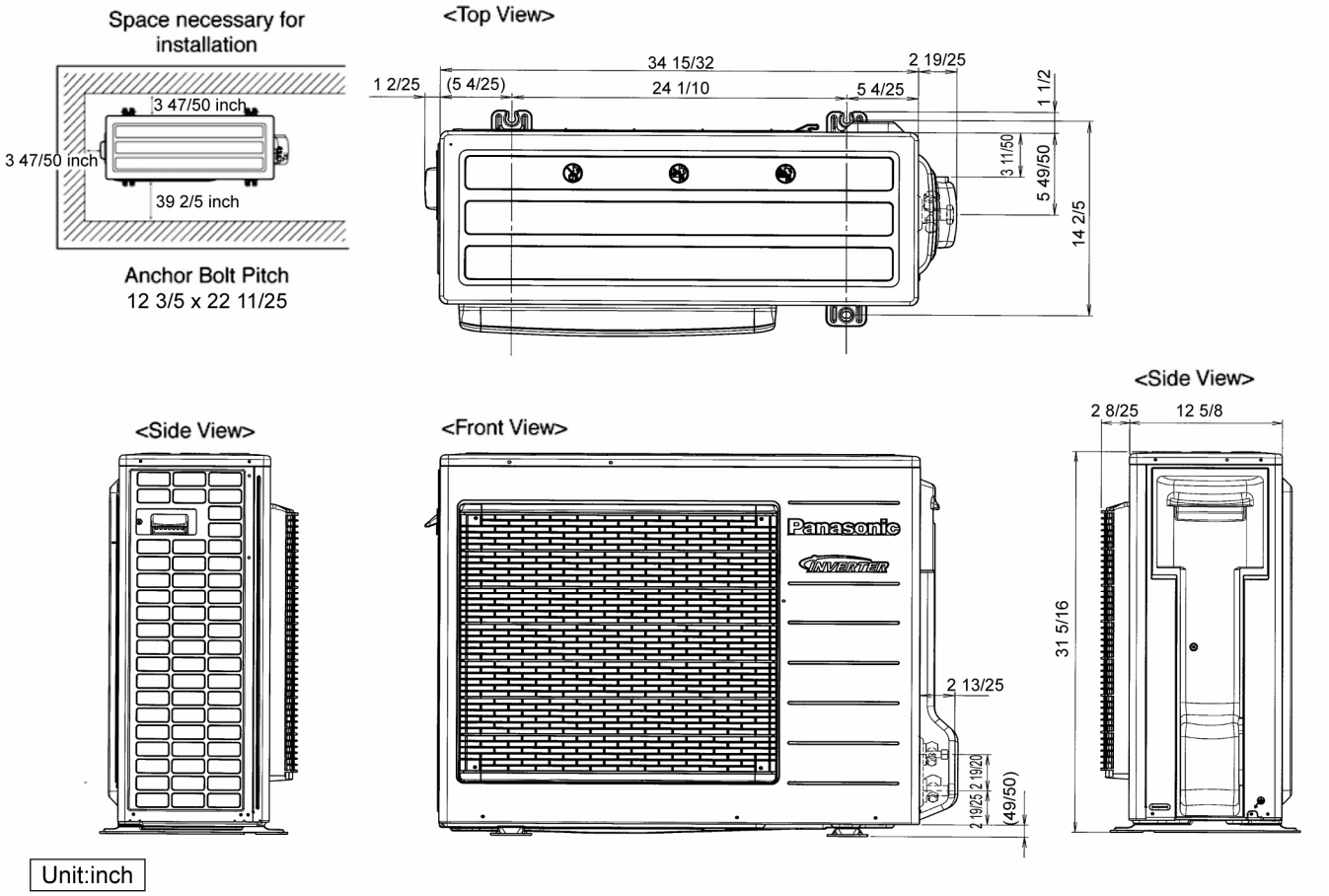
4.2 Outdoor Unit

4.2.1 CU-S9JKU CU-S12JKU



Unit:inch

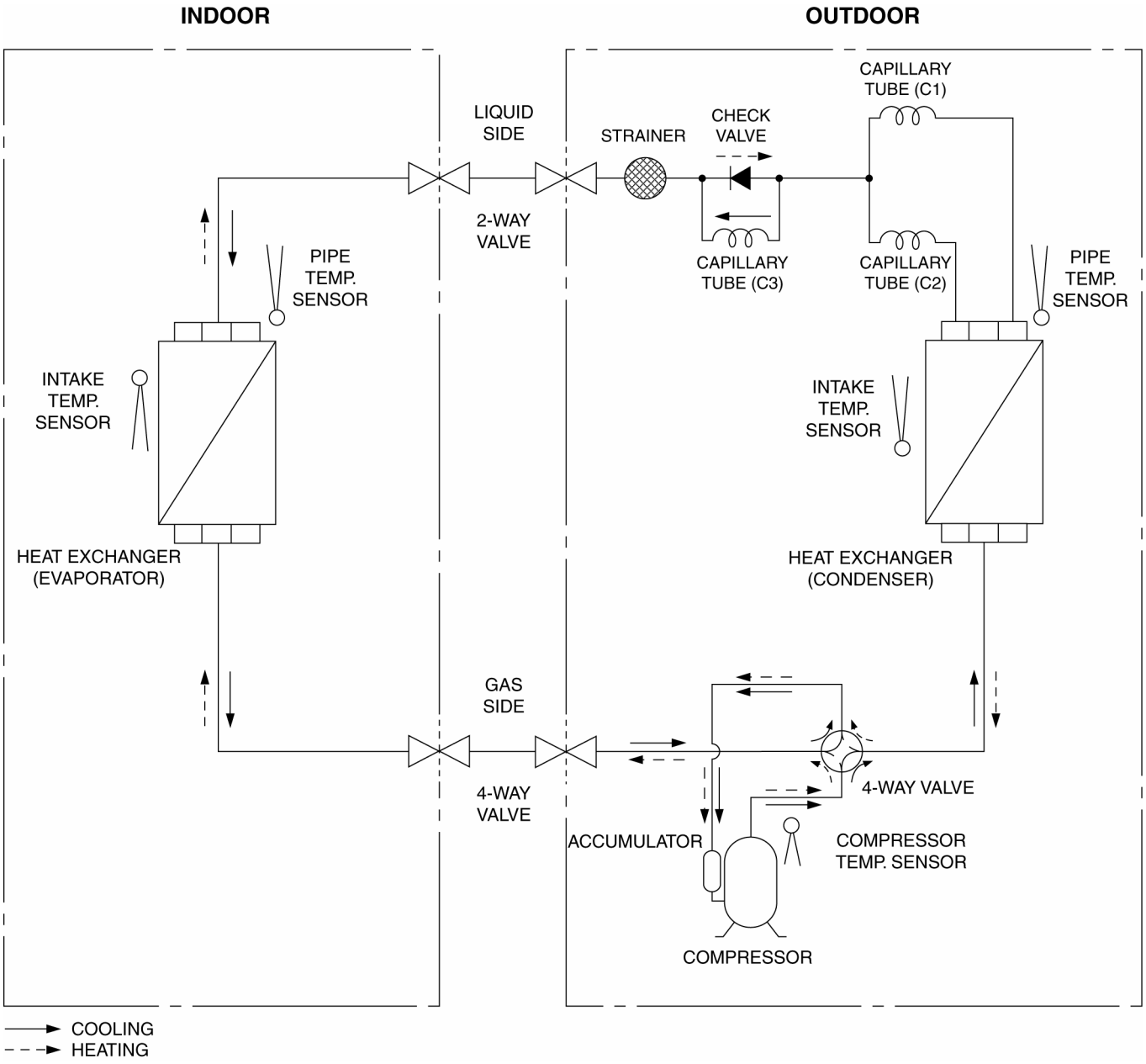
4.2.2 CU-S18JKU CU-S22JKU



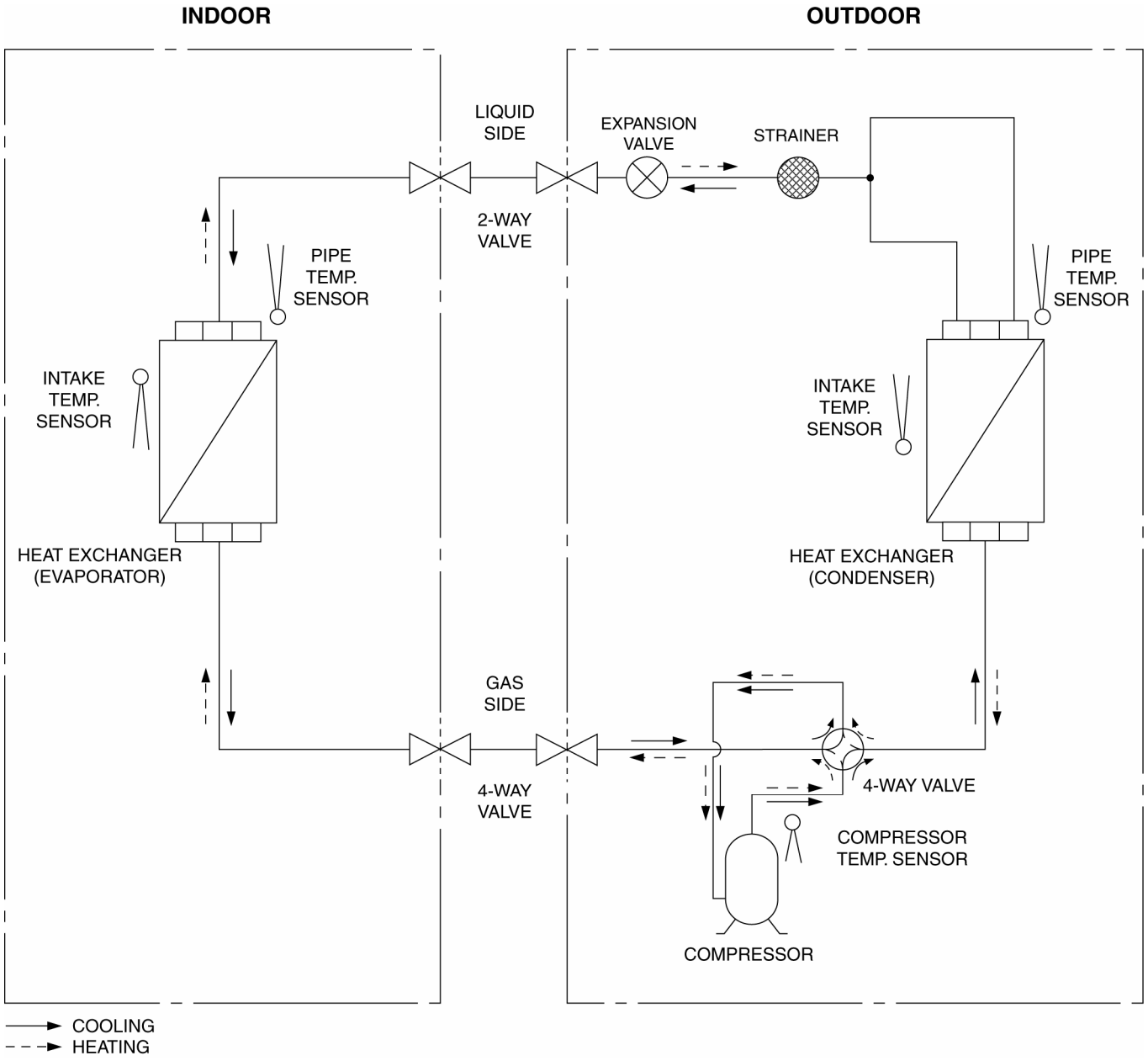
Unit:inch

5. Refrigeration Cycle Diagram

5.1 CS-S9JKUW CU-S9JKU CS-S12JKUW CU-S12JKU

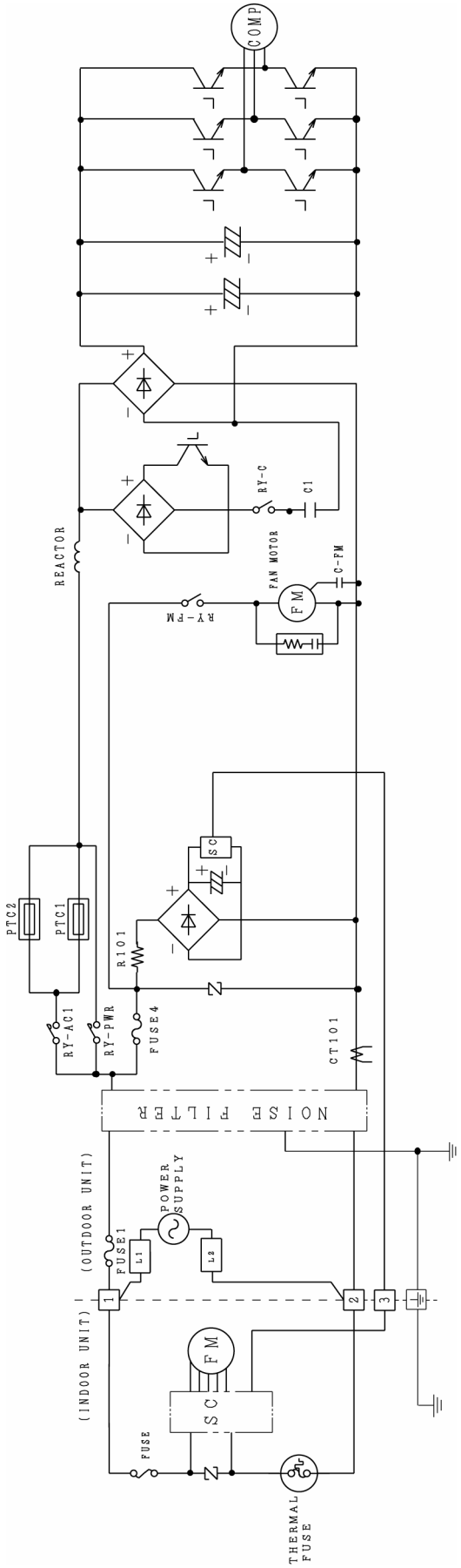


5.2 CS-S18JKU CU-S18JKU CS-S22JKU CU-S22JKU

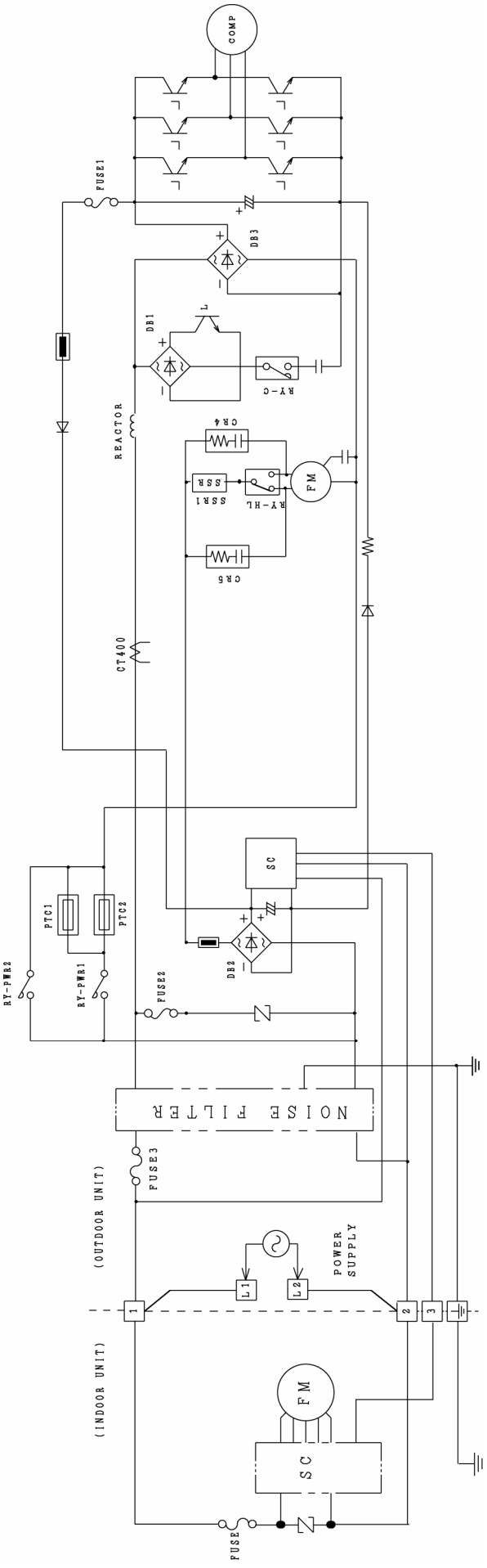


6. Block Diagram

6.1 CS-S9JKUW CU-S9JKU CS-S12JKUW CU-S12JKU



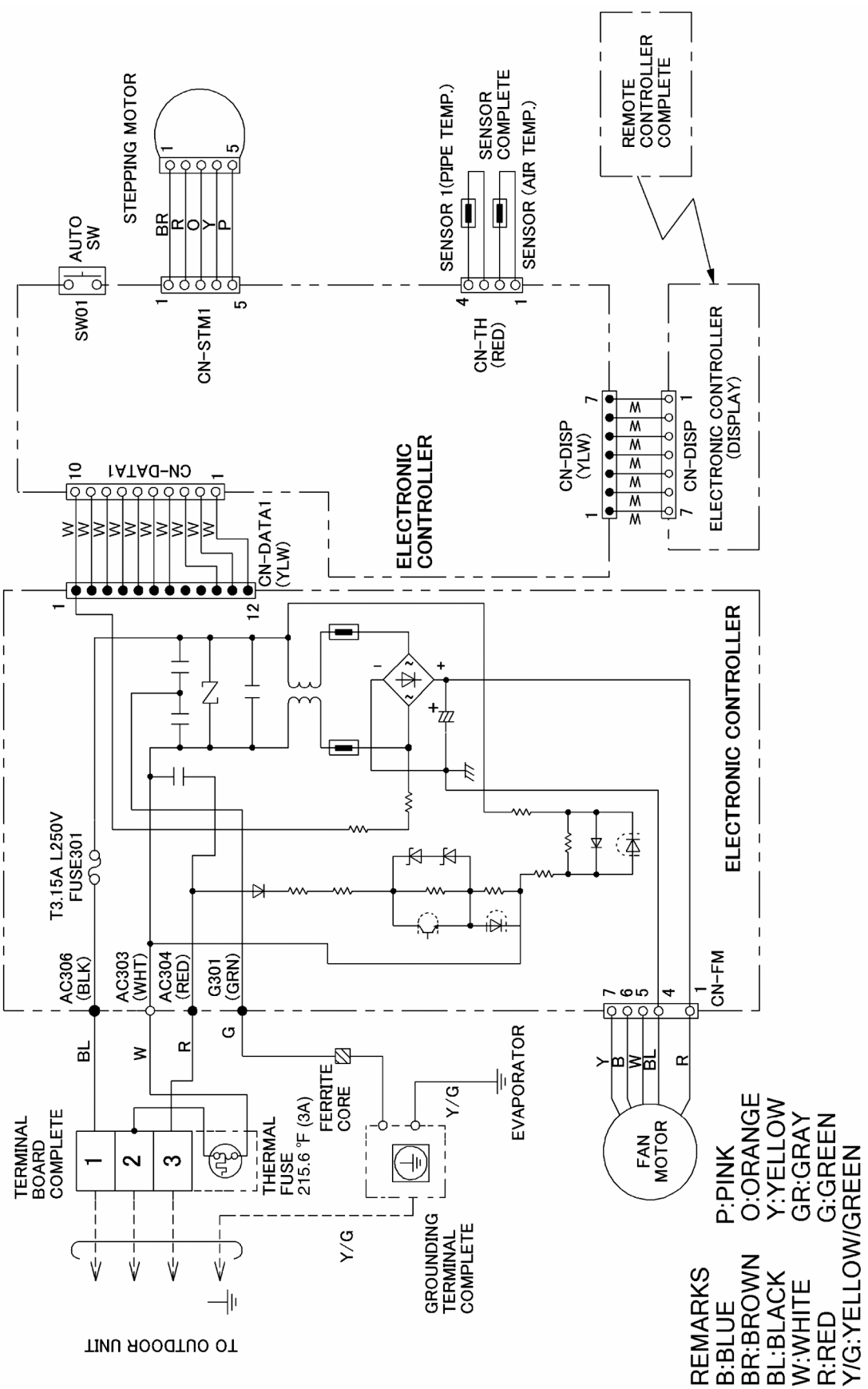
6.2 CS-S18JKU CU-S18JKU CS-S22JKU CU-S22JKU



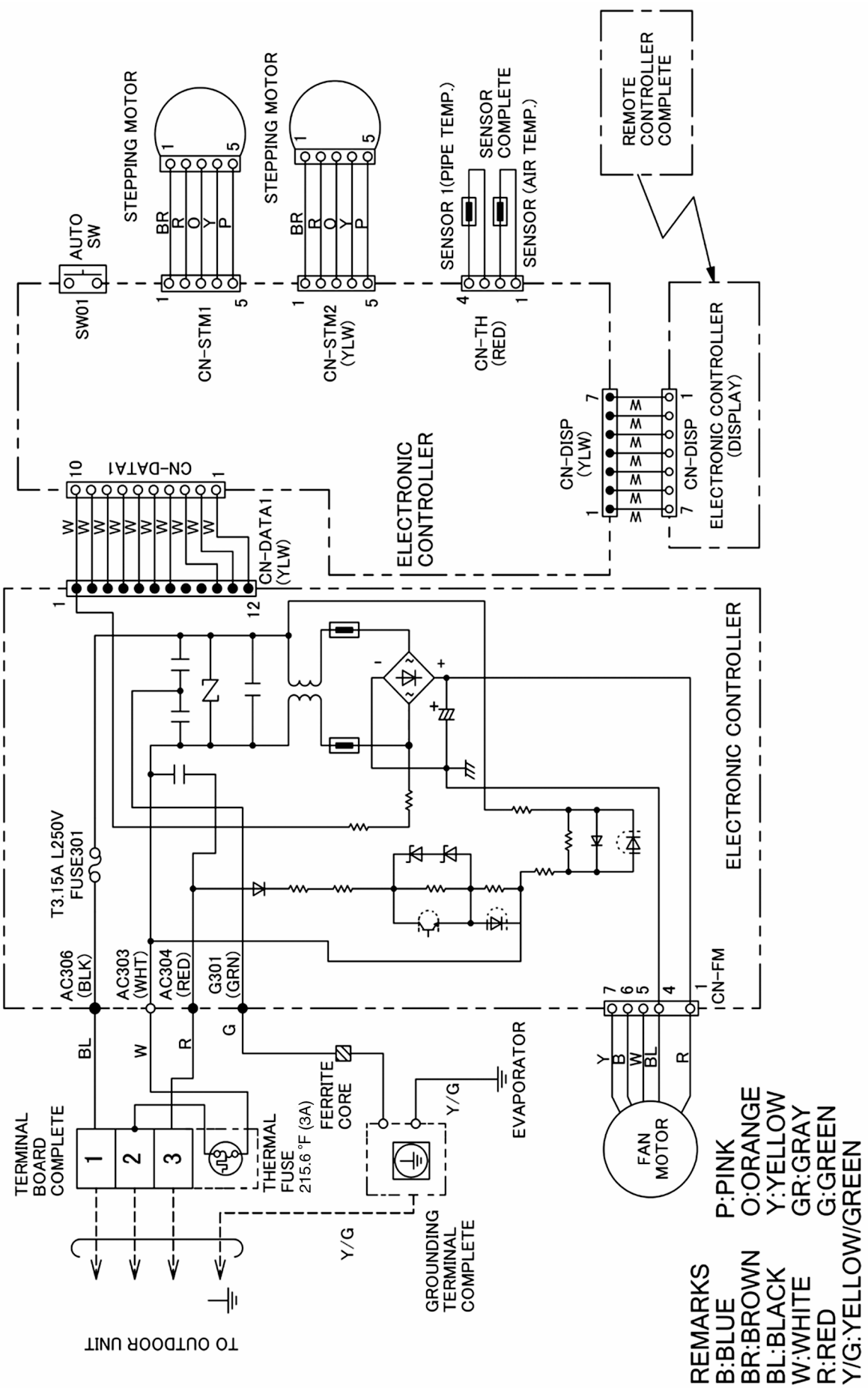
7. Wiring Connection Diagram

7.1 Indoor Unit

7.1.1 CS-S9JKUW CS-S12JKUW

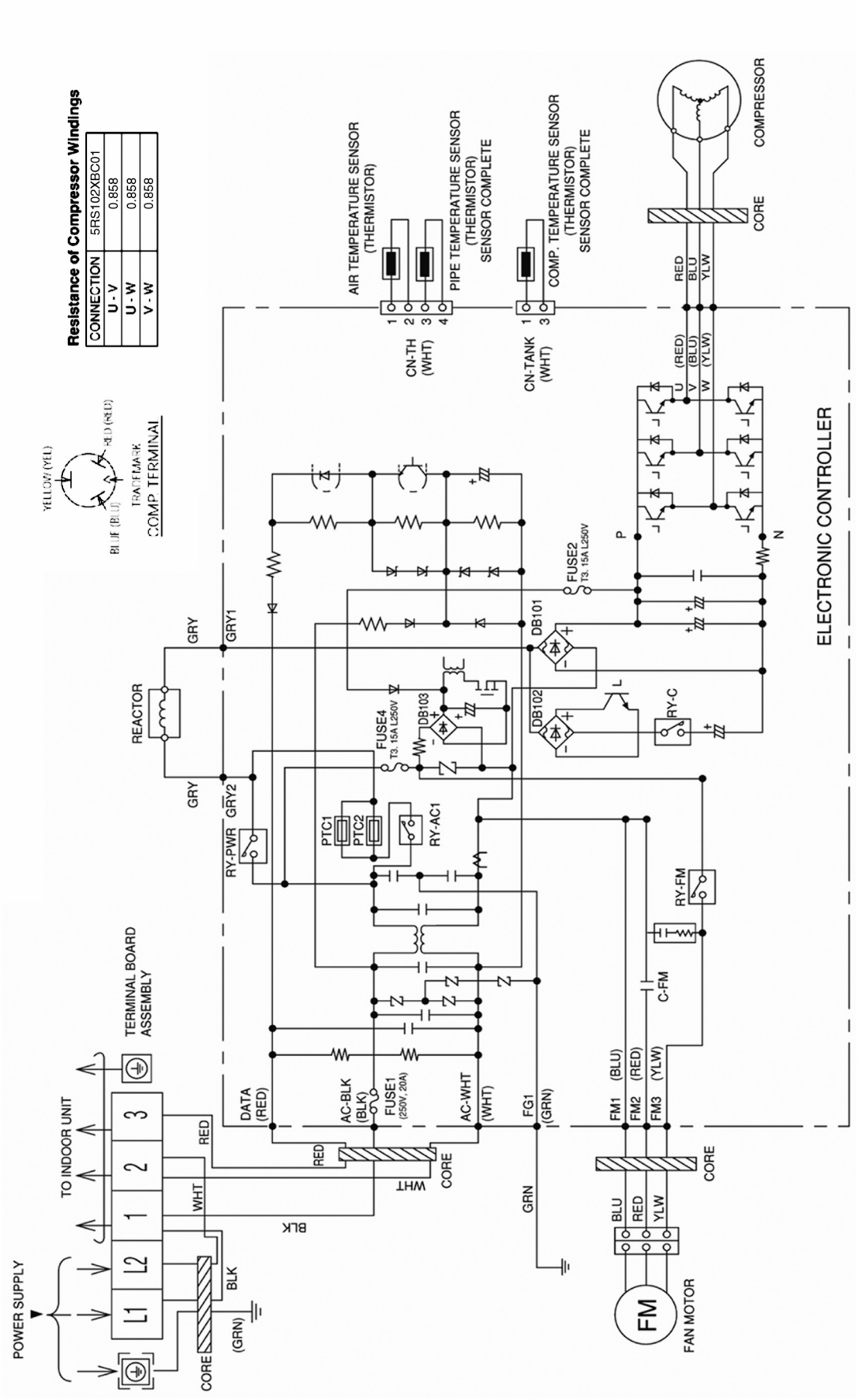


7.1.2 CS-S18JKU CS-S22JKU



7.2 Outdoor Unit

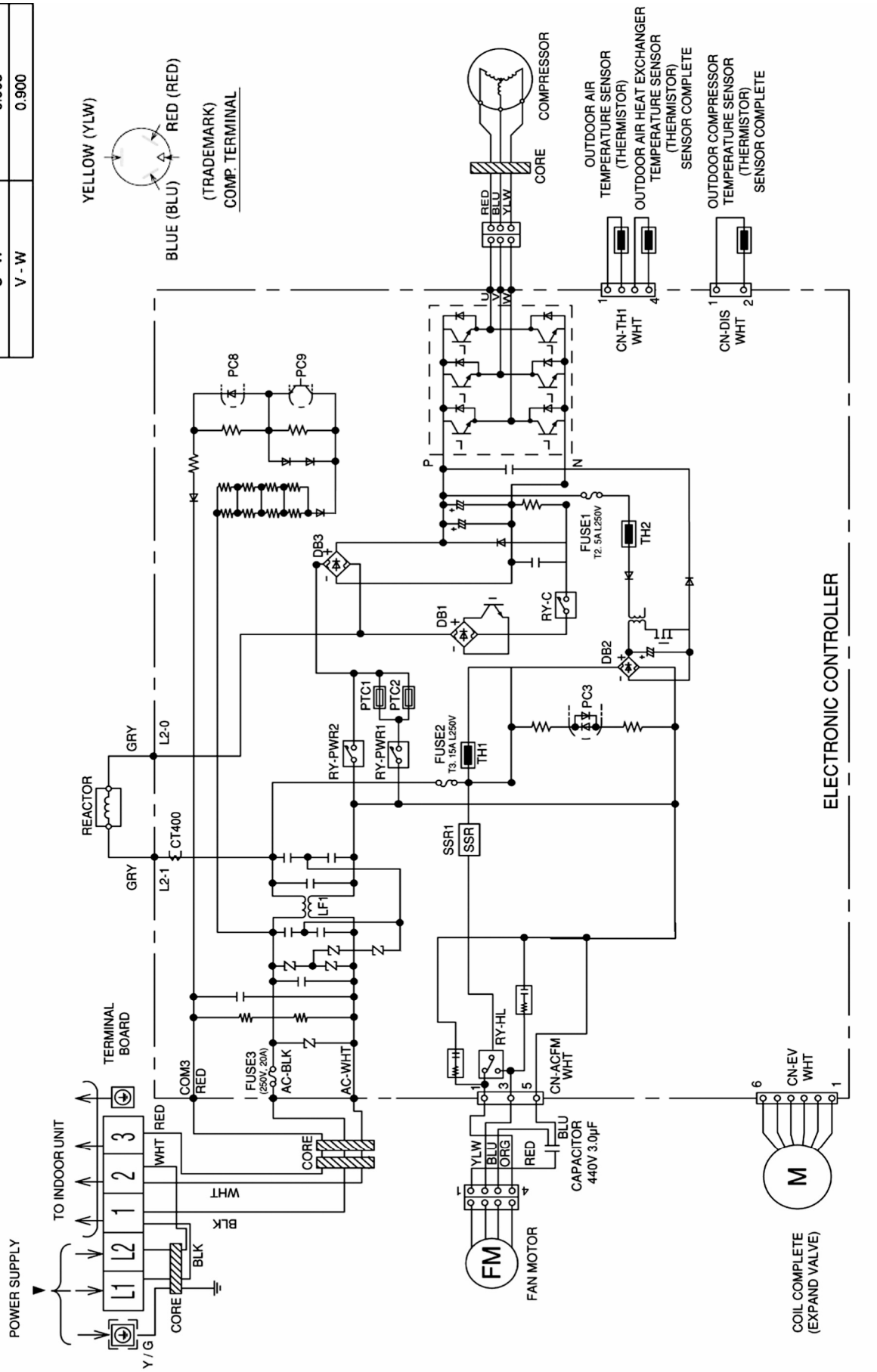
7.2.1 CU-S9JKU CU-S12JKU



7.2.2 CU-S18JKU

Resistance of Compressor Windings

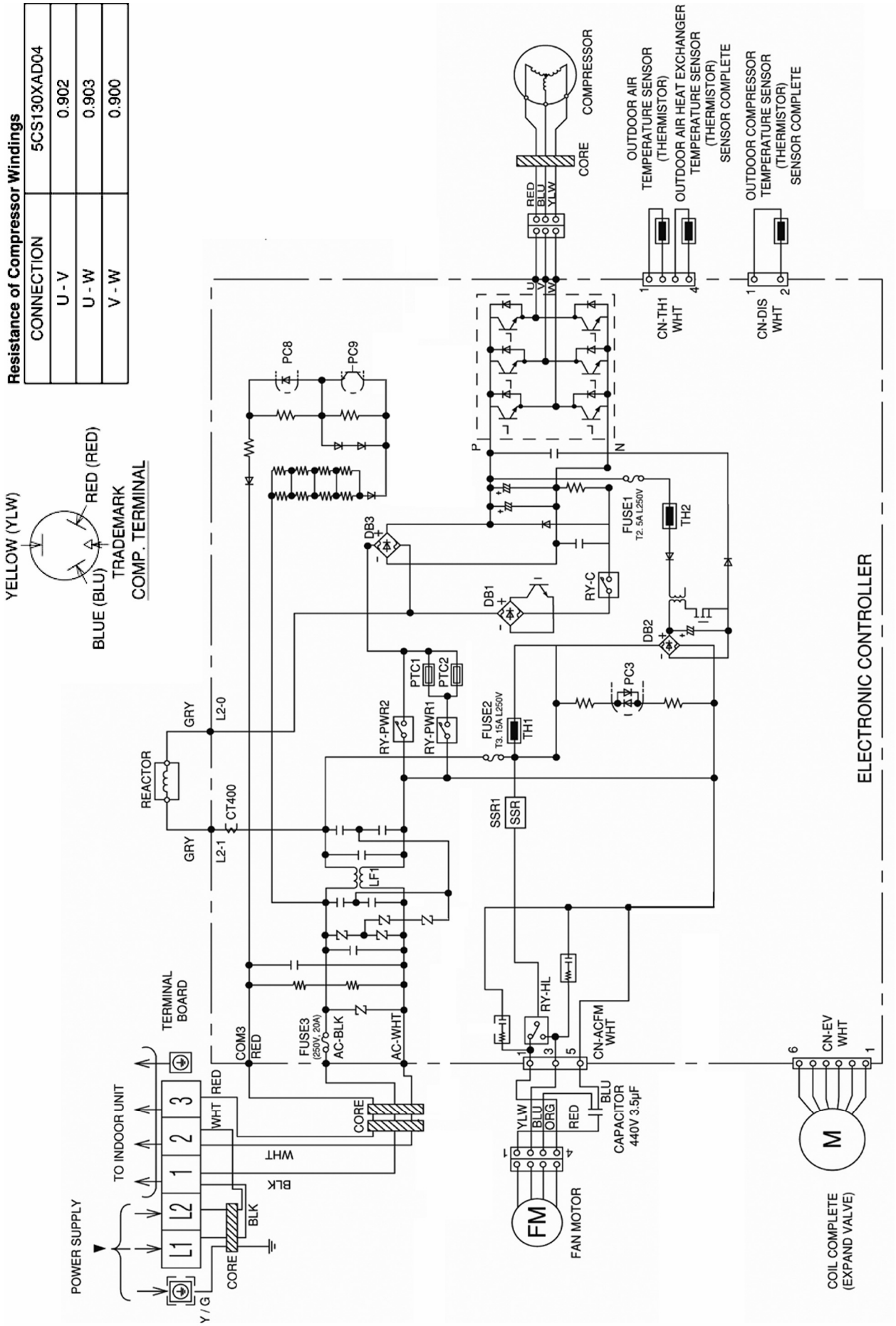
CONNECTION	5CS130XAD04
U - V	0.902
U - W	0.903
V - W	0.900



7.2.3 CU-S22JKU

Resistance of Compressor Windings

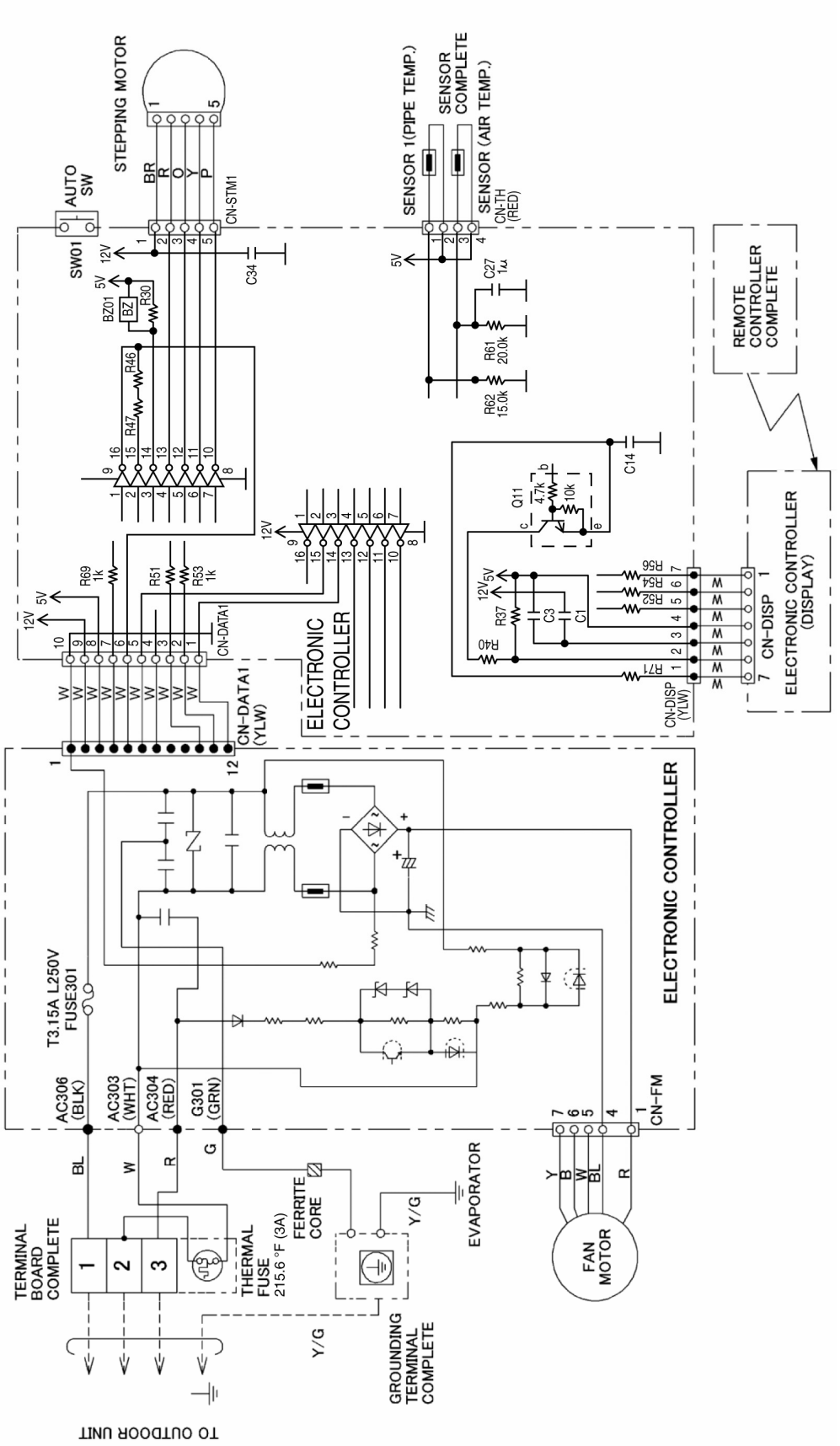
CONNECTION	5CS130XAD04
U - V	0.902
U - W	0.903
V - W	0.900



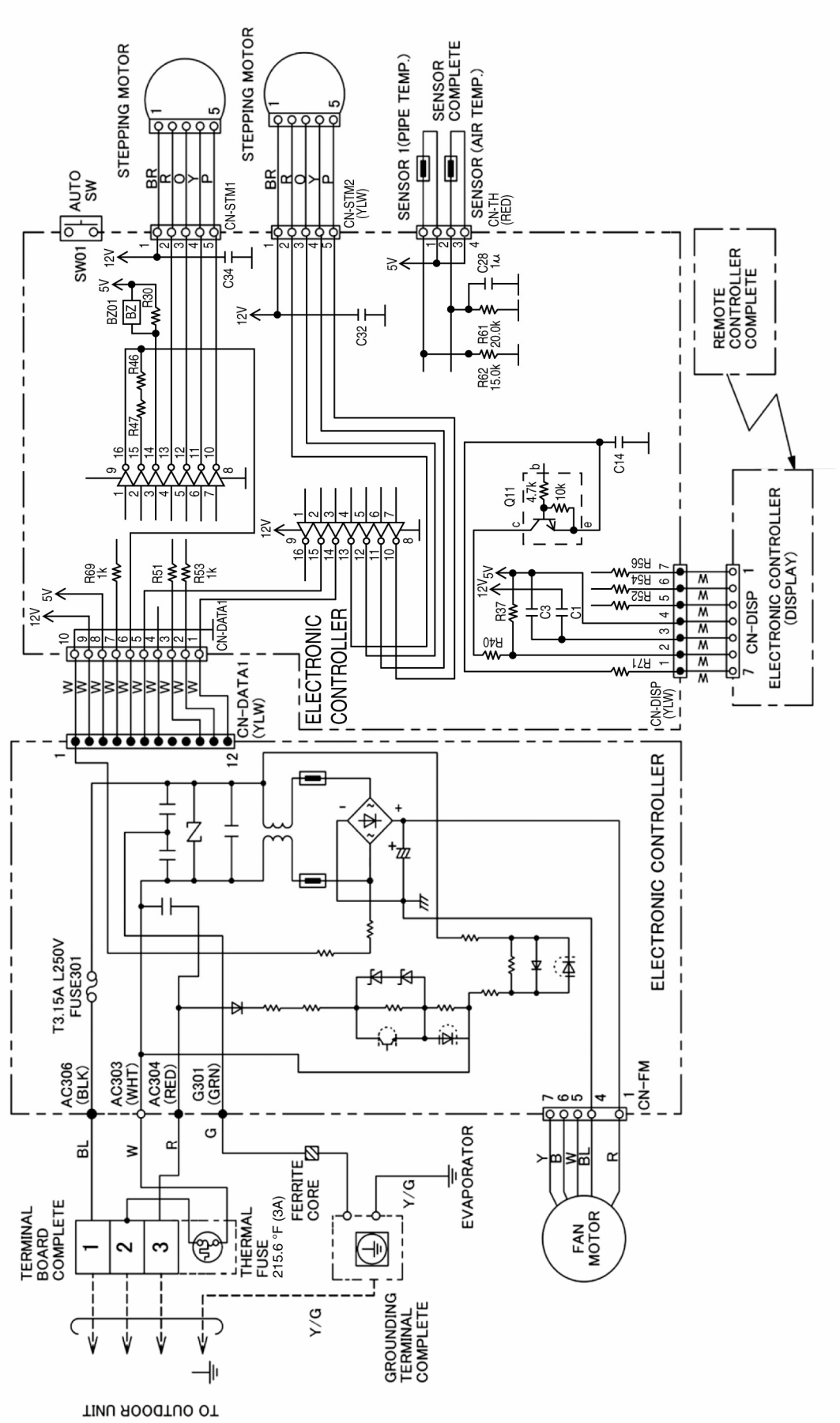
8. Electronic Circuit Diagram

8.1 Indoor Unit

8.1.1 CS-S9JKUW CS-S12JKUW

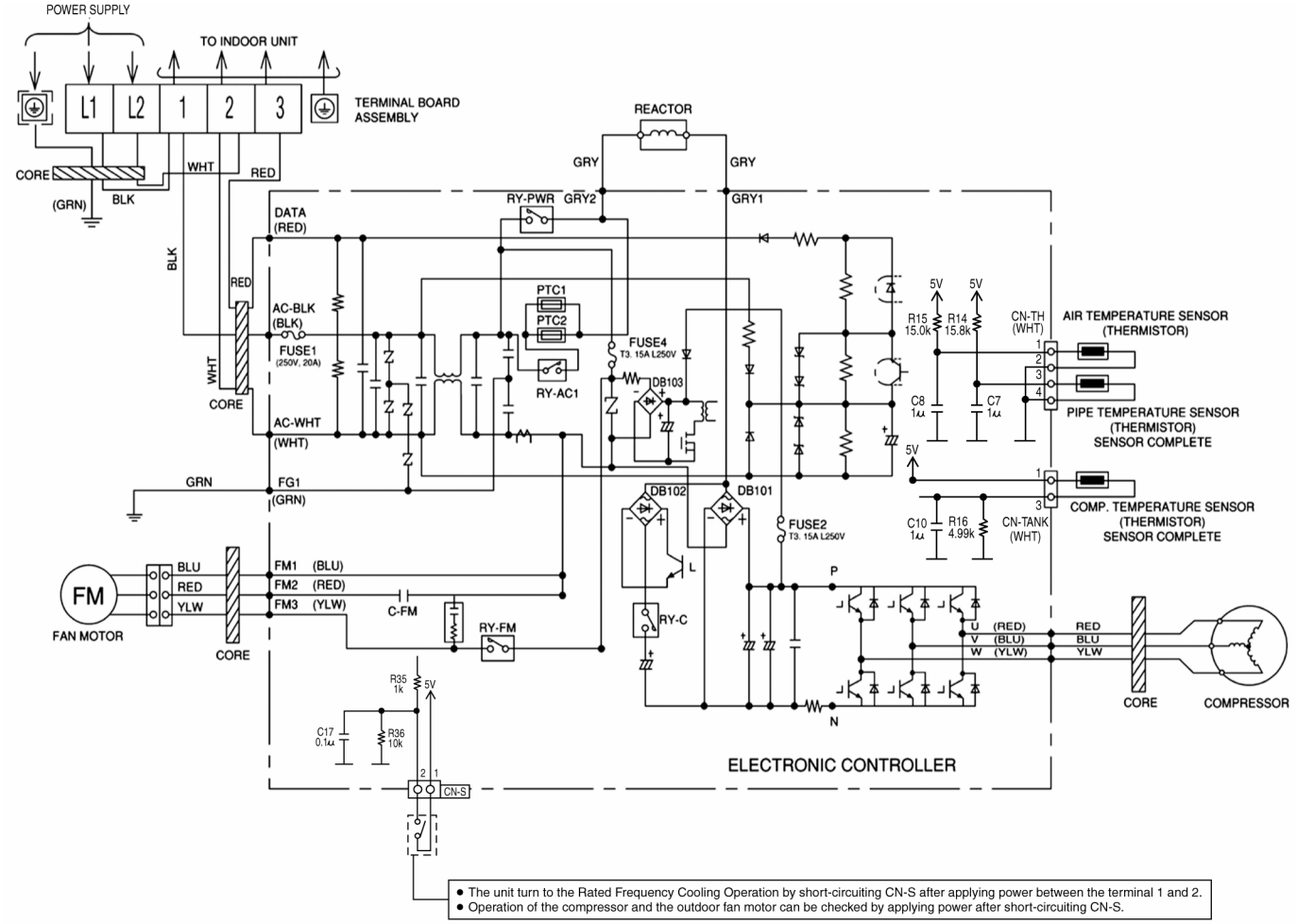


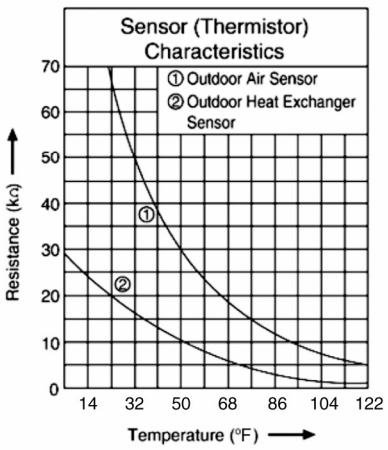
8.1.2 CS-S18JKU CS-S22JKU

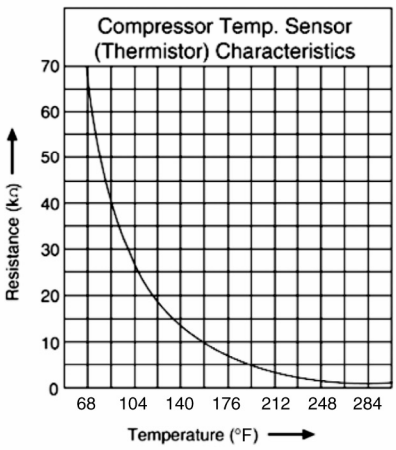


8.2 Outdoor Unit

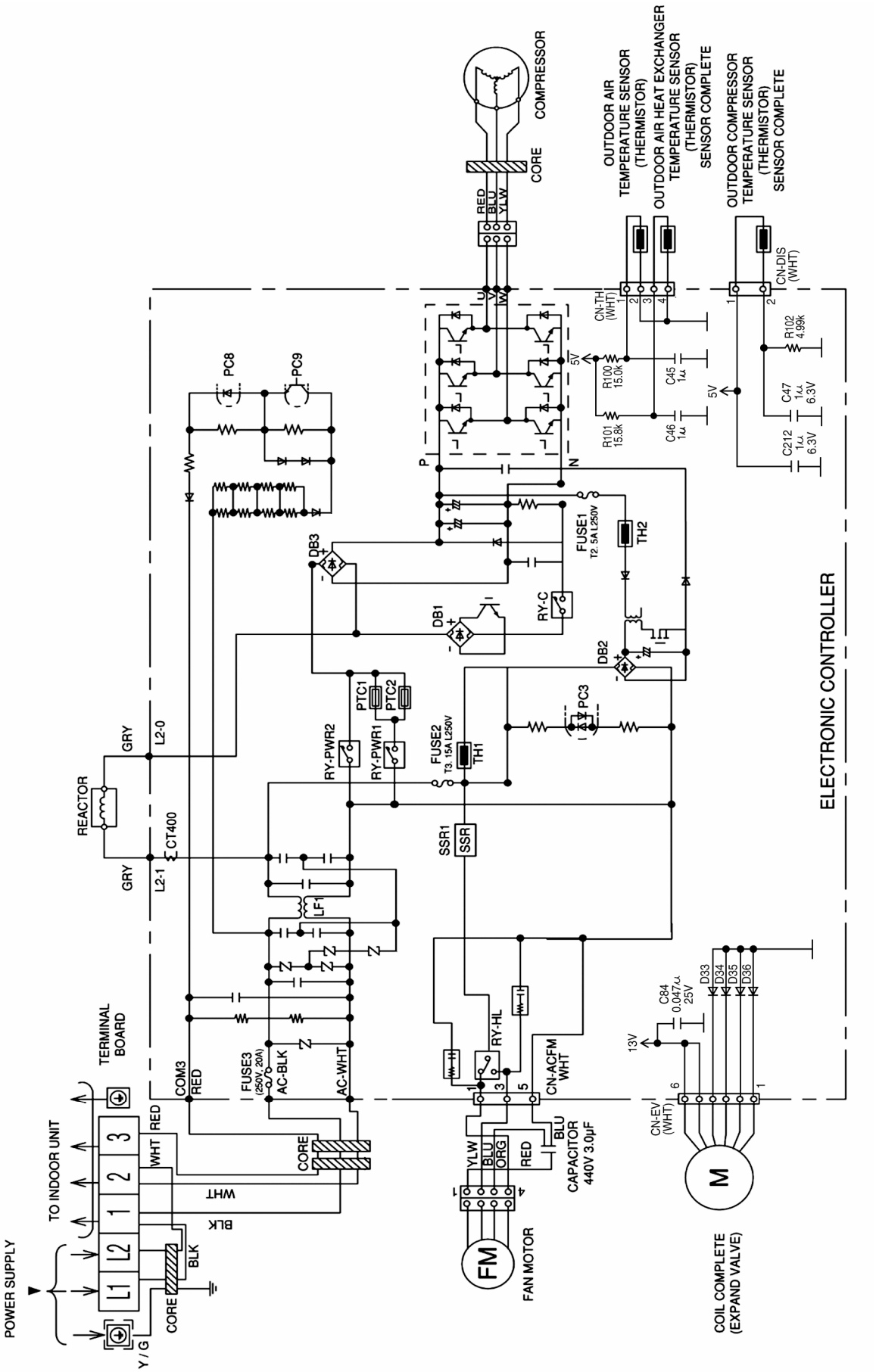
8.2.1 CU-S9JKU CU-S12JKU







8.2.2 CU-S18JKU



8.2.3 CU-S22JKU